
GENERAL ELECTRIC COMPANY

*Closure Certification for
Four Hazardous Waste Storage Areas*

***Electrical Distribution and Control
Manufacturing Facility***

June 1995



MONTGOMERY WATSON



R00024392

RCRA Records Center



Max Pickel
Manager - EHS

General Electric Company
P.O. Box 488, Burlington, IA 52601
Dial Comm 8*673-6493 - Fax 8*673-6514
319-753-8493- Fax 319-753-8514

June 13, 1995

Mr. Don Lininger
EPA Region VII
RCRA/Iowa
726 Minnesota Avenue
Kansas City, KS 66101

Re: Closure Certification Report
General Electric Company - West Burlington, Iowa

Dear Mr. Lininger:

The General Electric Company, through the services of Montgomery Watson, has completed closure activities at the West Burlington, Iowa, (IA D005272703) facility in accordance with the approved closure plan. The enclosed Closure Certification Report details site closure activities, sample analyses, quality assurance/quality control findings and the required certification of closure by a registered engineer.

Approval of this Closure Certification Report will complete all closure activities for the facility. The requirement of Financial Assurance for Closure is no longer necessary and the funds reserved for the West Burlington, Iowa, facility closure should be released. Please notify us by letter that these funds can be released.

If you have any questions or comments regarding this Closure Certification Report, please contact Terry Noteboom, (515) 253-0830, or myself.

Sincerely,

Max Pickel
Manager of Environment, Health & Safety

MP/sg

Enclosure

CLOSURE CERTIFICATION

FOR

**FOUR HAZARDOUS WASTE STORAGE AREAS
ELECTRICAL DISTRIBUTION AND CONTROL MANUFACTURING FACILITY**

Prepared for

**GENERAL ELECTRIC COMPANY
WEST BURLINGTON, IOWA**

Project No. 3286.0150

June 1995

Prepared by

**Montgomery Watson
11107 Aurora Avenue
Des Moines, Iowa 50322
515-253-0830**

I hereby certify that this plan, specification or report was prepared by me or under by direct supervision, and that I am a duly Registered Professional Engineer under the laws of the State of Iowa. I also certify that closure activities have been completed in accordance with the approved Closure Plan unless otherwise specified in detail within this document.

Brian C. Broderick
Brian C. Broderick, P.E.

12249
Iowa Reg.

06/12/95
Date



I hereby certify that closure activities have been completed in accordance with the approved Closure Plan unless otherwise specified in detail within this document.

T. M. G. Ginkel

6/13/95
Date

TABLE OF CONTENTS

	PAGE
SECTION 1 - INTRODUCTION	1
Background	1
Objective	2
SECTION 2 - CLOSURE ACTIVITIES	3
Outdoor Storage Rack Area	3
Decontamination Procedures	3
Sample Collection	3
Equipment Decontamination	4
Sludge Storage Area in "Big" Building	4
Decontamination Procedures	4
Sample Collection	4
Equipment Decontamination	5
Cyanide Storage Area	5
Decontamination Procedures	5
Sample Collection	5
Equipment Decontamination	6
Small Safety Storage Building and Drip Pans	6
Decontamination Procedures	6
Sample Collection	7
Equipment Decontamination	7
Sample Shipment and Analysis	7
Waste Disposal	7
SECTION 3 - DISCUSSION OF ANALYTICAL RESULTS	9
Target Cleanup Standards	9
Outdoor Storage Rack Area	9
Sludge Storage Area	10
Cyanide Storage Area	11
Small Safety Storage Building	11
Quality Assurance and Quality Control	12
Conclusions	13
APPENDIX A - PHOTO LOG	A-1
APPENDIX B - CHAIN OF CUSTODY	B-1
APPENDIX C - LABORATORY ANALYTICAL REPORT	C-1
APPENDIX D - LABORATORY QUALITY ASSURANCE/QUALITY CONTROL REPORT	D-1
APPENDIX E - REVISION REQUEST AND ACCEPTANCE LETTERS	E-1

TABLE OF CONTENTS

LIST OF FIGURES

FIGURE NO.		FOLLOWING PAGE
1-2	Site Location Map	1
1-2	Site Plan	1

SECTION 1

SECTION 1

INTRODUCTION

This section provides a summary of the background information and site information for the closure of four container storage areas at the General Electric Company (GE), Electrical Distribution & Control manufacturing facility in West Burlington, Iowa (Figure 1-1).

BACKGROUND

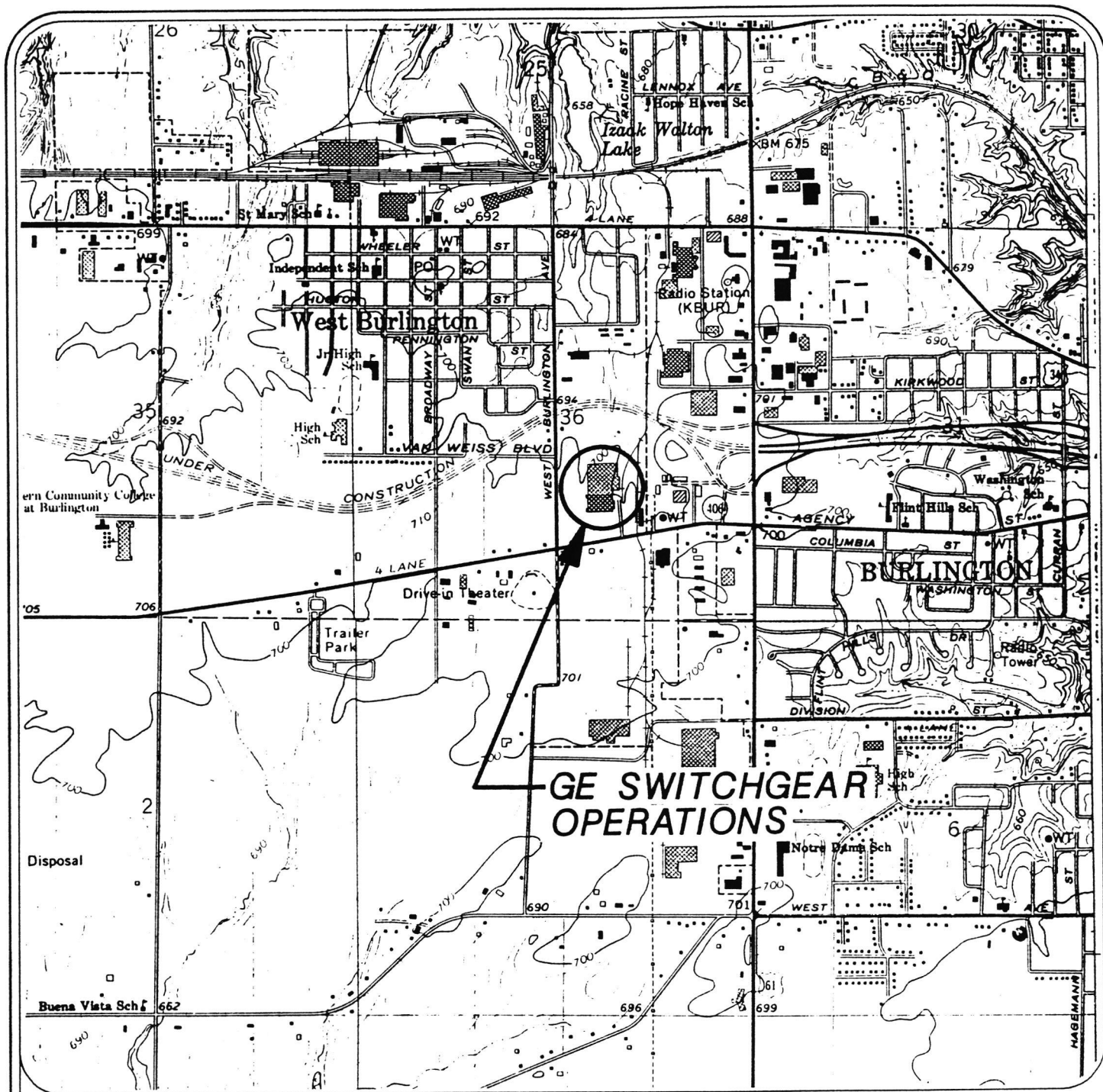
GE owns and operates an electrical switchgear manufacturing facility at 510 East Agency Road in West Burlington, Iowa. Four areas of the facility are subject to RCRA closure proceeding under paragraph 12(a) of the Consent Agreement and Consent Order (CA/CO) executed by GE and the U.S. Environmental Protection Agency (EPA), Region VII (Docket No. VII-93-H-0014, effective August 6, 1994). Two areas, the "Small" Safety Storage Building and Outdoor Storage Rack Area, were interim status areas requiring closure. The remaining two areas, the Sludge Storage Area and the Cyanide Storage Area, are both within the "Big" Building. Both areas of the "Big" Building were subject to closure provisions due to storage beyond the allowable 90 days for generator status.

The original storage system, used until 1989, consisted of a series of outdoor metal storage racks on which drums of hazardous waste were placed prior to off-site recycling/disposal. Drip pans were placed under the racks to contain spillage and precipitation. The pans were occasionally emptied into containers and manifested for off-site disposal. Under the original RCRA Part A documentation, the hazardous waste storage area had the capacity for 44, 55-gallon drums. The Part A application was modified in 1982 to increase the drum storage capacity to 100 drums. In 1989, the "Small" Safety Storage Building was placed into service adjacent to the Outdoor Storage Rack Area.

GE did not submit a RCRA Part B application and operated for several years under generator status (90 day accumulation). In the fall of 1993, a RCRA compliance inspection of the facility revealed waste had been stored beyond 90 days in two areas of the "Big" Building. The affected areas of the "Big" Building are shown in Figure 1-2.

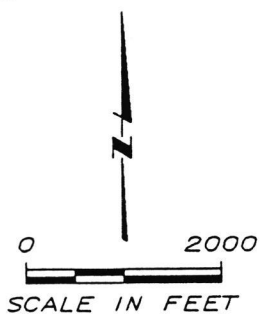
The CA/CO negotiated between GE and the EPA became effective on August 6, 1994. The CA/CO required closure of both the interim status areas and the areas where storage beyond 90 days had occurred.

GE contracted Montgomery Watson to develop and implement the required Closure Plan for all four areas to be closed. The Closure Plan for Former Hazardous Waste Container Storage Areas (Closure Plan) was submitted for EPA approval in September 1994 and, with minor revision, was approved in a letter dated December 2, 1994. Implementation of the closure activities was postponed until the spring of 1995 due to inclement weather and the necessity to work outdoors.



MAP SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLES,
WEST BURLINGTON, IOWA.

SITE LOCATION: SEC. 36, T. 70N., R. 3W.,
DES MOINES COUNTY.



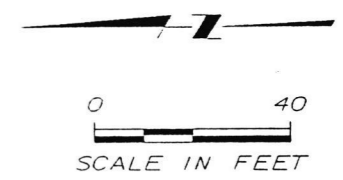
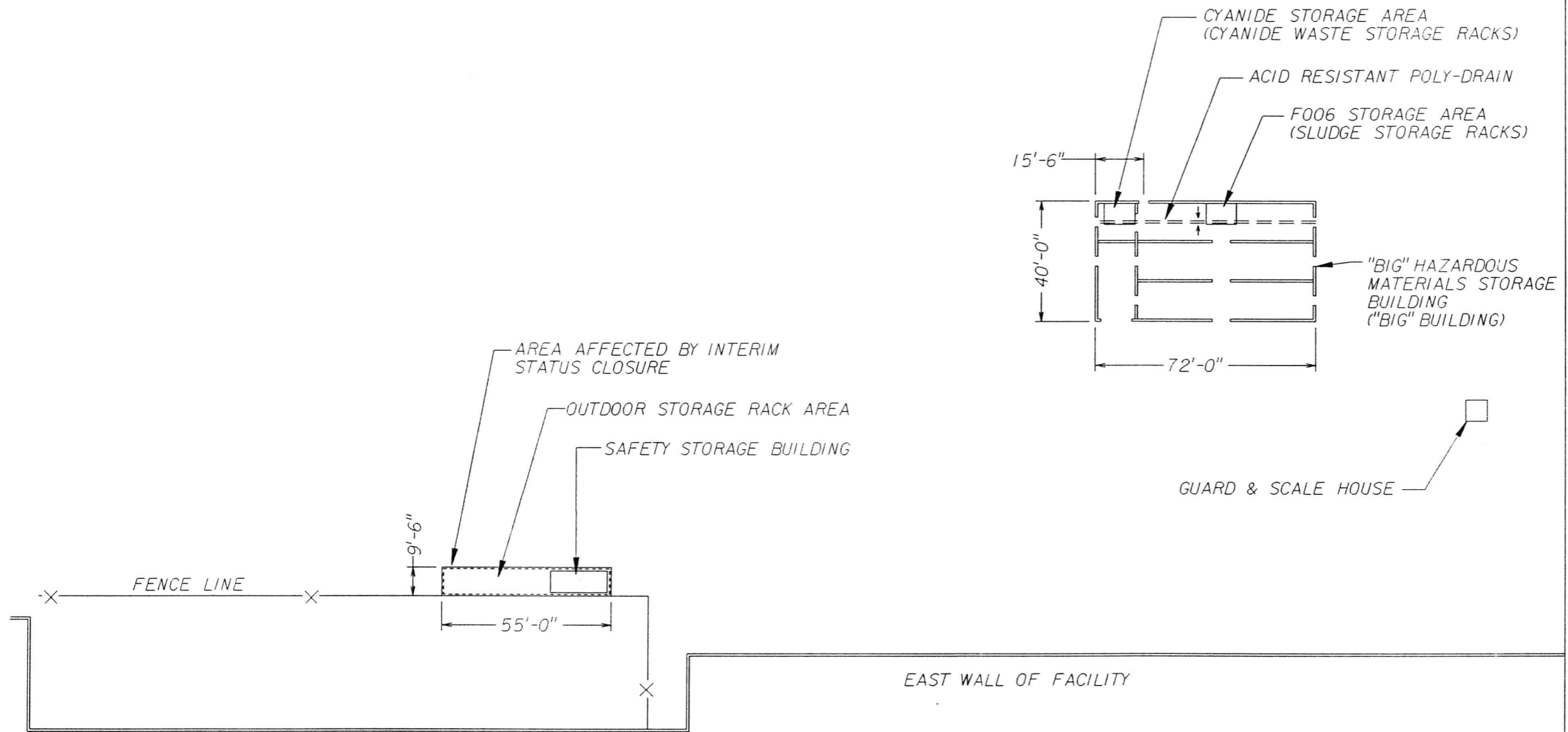
GENERAL ELECTRIC COMPANY
GE SWITCHGEAR OPERATION
WEST BURLINGTON, IOWA



MONTGOMERY WATSON

SITE LOCATION MAP

FIGURE 1-1



OBJECTIVE

The closure activities, as defined in the approved Closure Plan, were performed by J & R Drilling Services, Inc. under the direct supervision of Montgomery Watson on April 19, 1995. The objective of this document is to certify closure of all four container storage areas, in accordance with the approved Closure Plan, as required in 40 CFR 264.115. This Closure Certification will address the procedures utilized during closure activities, including decontamination and sampling.

SECTION 2

SECTION 2

CLOSURE ACTIVITIES

This section summarizes the procedures followed during closure of the four container storage areas. The documentation for each area will be presented separately. Photographs documenting the closure activities are presented in Appendix A.

OUTDOOR STORAGE RACK AREA

Decontamination Procedures

The area to be closed was first swept to remove loose debris. The sweepings were containerized, for disposal as hazardous waste, as described in the Closure Plan. The storage racks were then washed with high-pressure, hot water and Alcojet® detergent. The resultant water was collected into a drum with a drum vacuum. After the racks were cleaned, the pad below the racks was washed with high-pressure, hot water and Alcojet® detergent. Again, the resultant water was collected into a drum with a drum vacuum. A stiff-bristled broom was used to provide additional cleaning action on the pad. Following completion of the wash procedure, the drum vacuum was decontaminated by inserting the high-pressure sprayer into the vacuum hose for 15 to 20 seconds of continuous spray. This entire procedure collected approximately 50 gallons of decontamination water which was labeled as "Decontamination Water - Outdoor Storage Racks." The drum of decontamination water was sealed and placed on the decontaminated area for storage prior to disposal.

The storage racks and pad were then rinsed with high-pressure hot water spray without detergent. The resulting rinse waters were collected into drums with the drum vacuum. A second rinse was performed using hot, low-pressure water. The total rinse water generated by both rinses was approximately 60 gallons. The drums of rinse water were labeled "Rinse Water - Outdoor Storage Racks." The drums of rinse water were sealed and placed on the decontaminated area for storage prior to disposal.

Sample Collection

The drums containing rinse water were sampled using a clean Teflon® bailer. The drums of rinse water were sampled first by lowering the bailer to the bottom of the drum and withdrawing the sample. The laboratory-supplied sample containers were filled directly from the bailer to minimize contamination. All sample containers were identified with sample location, date, time, initials of the collector, and placed into coolers for storage and transport.

Samples were then taken from the drum of decontamination water using the same bailer. The above procedures were repeated for sampling the drum of decontamination water. The bailer was not decontaminated between collection of the rinse water and decontamination water samples.

Equipment Decontamination

The brooms and drum vacuum were decontaminated with the high-pressure sprayer prior to moving to the next area for closure. Decontamination waters were placed into the drum labeled "Decontamination Water - Outdoor Storage Racks."

SLUDGE STORAGE AREA IN "BIG" BUILDING

Decontamination Procedures

The area to be closed was first swept to remove loose debris. The sweepings were containerized, for disposal as hazardous waste, as described in the Closure Plan. This closure area is located within an active chemical storage warehouse, and additional provisions were necessary to prevent decontamination and rinse water overspray from contacting other stored chemicals within the building. The racks and floor to be decontaminated were isolated from the remainder of the building through the use of plastic sheeting. A temporary enclosure was constructed to capture the overspray and direct the decontamination and rinse water to the vacuum intake.

The storage racks and walls were then washed with high-pressure, hot water and Alcojet® detergent. The resultant water was collected into a drum with a drum vacuum. After the racks and walls were cleaned, the concrete floor below the racks was washed with high-pressure, hot water and Alcojet® detergent. The resultant water was collected into a drum with a drum vacuum. A stiff bristled broom was used to provide additional cleaning action on the floor. Following completion of the wash procedure, the drum vacuum was decontaminated by inserting the high-pressure sprayer into the vacuum hose for 15 to 20 seconds of continuous spray. This entire procedure generated approximately 25 gallons of decontamination water which was labeled as "Decontamination Water - Sludge Storage Racks." The drum of decontamination water was sealed and placed into temporary storage prior to disposal.

The storage racks, wall, and floor were then rinsed with high-pressure hot water spray without detergent. The resulting rinse waters were collected into a clean drum with the drum vacuum. A second rinse was performed using hot low-pressure water. The total rinse water for both rinses was approximately 20 gallons. The drum of rinse water was labeled "Rinse Water - Sludge Storage Racks." The drum of rinse water was sealed and placed into temporary storage prior to disposal.

Sample Collection

The drum containing rinse water was sampled using a clean Teflon® bailer. The drum of rinse water was sampled first by lowering the bailer to the bottom of the drum and withdrawing the sample. The laboratory-supplied sample containers were filled directly from the bailer to minimize contamination. All sample containers were identified with sample location, date, time, initials of the collector, and placed into coolers for storage and transport.

Samples were then taken from the drum of decontamination water using the same bailer. The above procedures were repeated for sampling the drum of decontamination water. The bailer was not decontaminated between collection of the rinse water and decontamination water samples.

Equipment Decontamination

The brooms and drum vacuum were decontaminated with the high-pressure sprayer prior to moving to the next area for closure. Decontamination waters were placed into the drum labeled "Decontamination Water - Sludge Storage Racks."

CYANIDE STORAGE AREA

Decontamination Procedures

The area to be closed was first swept to remove loose debris. The sweepings were containerized for disposal as hazardous waste, as described in the Closure Plan. This closure area is located within an active chemical storage warehouse, and additional provisions were necessary to prevent decontamination and rinse water overspray from contacting other stored chemicals within the building. The racks, wall, and floor to be decontaminated were isolated from the remainder of the building through the use of plastic sheeting. A temporary enclosure was constructed to capture the overspray and direct the decontamination and rinse water to the vacuum intake.

The storage racks and wall were then washed with high-pressure, hot water and Alcojet® detergent. The resultant water was collected into a drum with a drum vacuum. After the racks and wall were cleaned, the concrete floor below the racks was washed with high-pressure, hot water and Alcojet® detergent. Again, the resultant water was collected into a drum with a drum vacuum. A stiff-bristled broom was used to provide additional cleaning action on the floor. Following completion of the wash procedure, the drum vacuum was decontaminated by inserting the high-pressure sprayer into the vacuum hose for 15 to 20 seconds of continuous spray. This entire procedure generated approximately 30 gallons of decontamination water which was labeled as "Decontamination Water - Cyanide Storage Racks." The drum of decontamination water was sealed and stored in the Cyanide Storage Area.

The storage racks, wall and floor were then rinsed with high-pressure hot water spray without detergent. The resulting rinse waters were collected into a drum with the drum vacuum. A second rinse was performed using hot, low-pressure water. The total rinse water for both rinses was approximately 20 gallons. The drum of rinse water was labeled "Rinse Water - Cyanide Storage Racks." The drum of rinse water was sealed and stored in the Cyanide Storage Area.

Sample Collection

The drum containing rinse water was sampled using a clean Teflon® bailer. The drum of rinse water was sampled first by lowering the bailer to the bottom of the drum and withdrawing the sample. The laboratory-supplied sample containers were filled directly from the bailer to minimize contamination. All sample containers were identified with sampling location, date, time, initials of the collector, and placed into coolers for storage and transport.

Samples were then taken from the drum of decontamination water using the same bailer. The above procedures were repeated for sampling the drum of decontamination water. The bailer was not decontaminated between collection of the rinse water and decontamination water samples.

Equipment Decontamination

The brooms and drum vacuum were decontaminated with the high-pressure sprayer. Decontamination waters were placed into the drum labeled "Decontamination Water - Cyanide Storage Racks."

SMALL SAFETY STORAGE BUILDING AND DRIP PANS

Prior to implementing the approved Closure Plan it was discovered that a portion of the approved Closure Plan was incorrect. The approved plan states that the drip pans from the former Outdoor Storage Rack Area were stored within the "Big" Building when, in fact, they had always been stored inside the "Small" Safety Storage Building. This information was relayed to Don Lininger (EPA Region VII, RCRA-Iowa) by telephone on April 12, 1995. It was agreed to address the drip pans and "Small" Safety Storage Building as a single closure area and to note this modification in the Closure Certification.

Decontamination Procedures

The area to be closed is a small steel building specifically designed as a chemical storage building. The building has a secondary containment sump beneath the working floor. The working floor was believed to be constructed of fiberglass but, during the decontamination process, was determined to be wooden (plywood). All other surfaces within the building were smooth, welded steel which was painted for corrosion resistance.

The drip pans from the former outside storage racks were stored inside the "Small" Safety Storage Building for the past several years. The drip pans are constructed of smooth aluminum or stainless steel with welded seams and are approximately 3.5 feet square and 10 inches deep.

The drip pans were washed with high-pressure, hot water and Alcojet® detergent, in conjunction with scrubbing using a stiff-bristled broom. The resultant water was collected in the "Small" Safety Storage Building's secondary containment sump. The pans were then double rinsed with high-pressure, hot water and removed from the building. After the drip pans were cleaned, the interior of the building was washed using the same procedures. The floor was lifted (one section at a time), cleaned on all sides, and stacked against an interior wall. When the floor sections were all cleaned, the drum vacuum intake was inserted into the secondary containment sump, and the vacuum was started. The collected water was transferred into drums using the drum vacuum. The secondary containment sump was then cleaned following procedures described above. Washing with high-pressure hot water continued until all granular material and water were vacuumed out of the sump. Following completion of the decontamination procedure, the drum vacuum was decontaminated by inserting the high-pressure sprayer into the vacuum hose for 15 to 20 seconds of continuous spray. This entire procedure generated approximately 130 gallons of decontamination water which was placed in drums, labeled as "Decontamination Water - Small Safety Storage Building." The drums of decontamination water were sealed and placed in storage prior to disposal.

All drip pans, building interior, containment sump and floor sections were rinsed with high-pressure hot water spray without detergent. The resulting rinse waters were collected into a drum

with the drum vacuum. A second rinse was performed using hot, low-pressure water. The total rinse water generated from both rinses was approximately 50 gallons. The drum of rinse water was labeled "Rinse Water - Small Safety Storage Building." The drum of rinse water was sealed and placed in storage prior to disposal.

Sample Collection

The drum containing rinse water was sampled using a clean Teflon® bailer. The drum of rinse water was sampled first by lowering the bailer to the bottom of the drum and withdrawing the sample. The laboratory-supplied sample containers were filled directly from the bailer to minimize contamination. All sample containers were identified with sampling location, date, time, initials of the collector, and placed into coolers for storage and transport.

Samples were then taken from the drums of decontamination water using the same bailer. The above procedures were repeated for sampling the drums of decontamination water. The bailer was not decontaminated between collection of the rinse water and decontamination water samples.

Equipment Decontamination

The brooms and drum vacuum were decontaminated with the high-pressure sprayer. Decontamination waters were placed into the drums labeled "Decontamination Water - Small Safety Storage Building."

SAMPLE SHIPMENT AND ANALYSIS

All sample containers were labeled and packaged by Montgomery Watson personnel and shipped via Keystone Laboratories, Inc. (Keystone) courier to Keystone in Newton, Iowa. Samples were analyzed for the selected parameters presented in Section 3. Samples for metals analyses were preserved with nitric acid, samples for cyanide analysis were preserved with sodium hydroxide, and samples for volatile organic compound (VOC) analyses were preserved with hydrochloric acid. All samples were cooled to 4° Celsius for transporting and shipping. Chain of Custody forms accompanied all samples and are included in Appendix B. All drums of decontamination water and rinse water were stored on site at the GE facility.

WASTE DISPOSAL

The wastes generated during the closure activities will be disposed in the following manner.

Floor sweepings (30-90 pounds) from the Outdoor Storage Rack Area, Sludge Storage Area, and the "Small" Safety Storage Building were containerized and combined with existing hazardous waste streams for disposal by Clean Harbors of Chicago, Illinois.

Floor sweepings (5-7 pounds) from the Cyanide Storage Area and personal protective equipment (gloves, coveralls, etc.) were added to the cyanide debris hazardous waste stream, which is routinely generated at the facility. This waste is disposed of by Clean Harbor, Illinois.

Decontamination waters and rinse waters from the Outdoor Storage Rack Area, Sludge Storage Area, and Cyanide Storage Area will be disposed into the on-site waste water treatment system for metals precipitation prior to discharge.

Decontamination and rinse waters generated in the "Small" Safety Storage Building will be disposed into the on-site waste water treatment system. Due to the cyanide concentrations present in these waters, they will enter the cyanide destruction system for cyanide treatment prior to metals precipitation and discharge.

The plywood floor has been sampled to determine which disposal options are available. The floor will be disposed by Clean Harbors of Chicago, Illinois.

When closure-generated wastes are disposed, documentation of the method of disposal (or copies of the shipping papers) will be forwarded to the EPA.

SECTION 3

SECTION 3

DISCUSSION OF ANALYTICAL RESULTS

Discussion of the analytical results will be presented by closure area. A copy of the Laboratory Analytical Report is included as Appendix C and a copy of the Laboratory Quality Assurance/Quality Control Report is included as Appendix D.

TARGET CLEANUP STANDARDS

Parameters for analysis and cleanup standards are presented below:

Parameter	Target Cleanup Level (mg/L)	Outdoor Storage Rack Area	Sludge Storage Area	Small Safety Storage Building	Cyanide Storage Area
Lead	0.05	X	X	X	X
Cyanide	0.7	X	X	X	X
Silver	0.02	X	X	X	X
Cadmium	0.01	X	X	X	X
Chromium	0.1	X	X	X	X
Xylenes	70.	X	X	X	
Ethylbenzene	4.	X	X	X	
Methyl Ethyl Ketone	2.		X	X	
Methyl Isobutyl Ketone	2.	X	X	X	
Toluene	10.	X	X	X	
1,1,1-Trichloroethane	0.2	X		X	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.001	X		X	
Benzene	0.005	X		X	

OUTDOOR STORAGE RACK AREA

Two samples from the Outdoor Storage Rack Area were analyzed. The first was a sample of the water used for decontamination purposes, and the second was from the final rinse of the area following decontamination. Only lead and silver were detected in the decontamination water sample at 0.047 mg/L and 0.017 mg/L, respectively. These and all other constituents were reduced to nondetectable levels in the final rinse sample. This area meets all target level cleanup standards and will be considered closed.

Parameter Targeted	Target Concentration (mg/L)	Wash Concentration (mg/L)	Rinse Concentration (mg/L)
1,1,1-Trichloroethane	0.2	< 0.001	< 0.001
1,1,2-Trichloro- 1,2,2-trifluoroethane	0.001	< 0.001	< 0.001
Methyl Isobutyl Ketone	2	< 0.005	< 0.005
Benzene	0.005	< 0.001	< 0.001
Ethylbenzene	4	< 0.001	< 0.001
Toluene	10	< 0.001	< 0.001
Xylenes	70	< 0.001	< 0.001
Cadmium	0.01	< 0.01	< 0.01
Chromium	0.1	< 0.03	< 0.03
Lead	0.05	0.047	< 0.02
Silver	0.02	0.017	< 0.005
Cyanide	0.7	< 0.35	< 0.35

SLUDGE STORAGE AREA

Two samples from the Sludge Storage Area were analyzed. The first was a sample of the water used for decontamination purposes, and the second was from the final rinse of the area following decontamination. Lead, silver, cadmium, chromium, and methyl ethyl ketone were detected in the decontamination water sample at levels above the target cleanup levels. The concentrations of each of these parameters in the final rinse water were reduced to nondetectable levels or levels, less than or equal to the target cleanup standards. This area meets all target level cleanup standards and will be considered closed.

Parameter Targeted	Target Concentration (mg/L)	Wash Concentration (mg/L)	Rinse Concentration (mg/L)
Methyl Isobutyl Ketone	2	< 0.005	< 0.005
Benzene	0.005	< 0.001	< 0.001
Ethylbenzene	4	< 0.001	< 0.001
Toluene	10	< 0.001	< 0.001
Xylenes	70	< 0.001	< 0.001
Methyl Ethyl Ketone	2	7.3	< 0.005
Cadmium	0.01	0.018	< 0.01
Chromium	0.1	0.249	< 0.03
Lead	0.05	0.197	0.029
Silver	0.02	0.142	0.02
Cyanide	0.7	< 0.35	< 0.35

CYANIDE STORAGE AREA

Two samples from the Cyanide Storage Area were analyzed. The first was a sample of the water used for decontamination purposes, and the second was from the final rinse of the area following decontamination. Only lead and silver were detected in the decontamination water sample at concentrations exceeding the target cleanup levels. The final rinse sample concentrations were reduced to nondetectable levels for all parameters except silver. The silver concentration in the final rinse was 0.027 mg/L which is 0.007 mg/L above the target cleanup standard.

The Cyanide Storage Area is a restricted access area of the facility due to the nature and value of the materials stored. The Cyanide Storage Area is locked at all times to prevent unauthorized entry. Only the Plating Process Technician, Facilities Engineer, and environmental staff are authorized to enter the Cyanide Storage Area. In light of the access restrictions, and the present and future use of this area, which is the storage of pure silver bar, concentrated silver cyanide plating bath reagents, and waste silver cyanide plating solutions; Montgomery Watson believes this area has been decontaminated sufficiently to meet the closure performance standard requirements of 40 CFR 265.111 and requests the target level for silver be modified to 0.027 mg/L to enable this area to be considered closed.

Parameter Targeted	Target Concentration (mg/L)	Wash Concentration (mg/L)	Rinse Concentration (mg/L)
Cadmium	0.01	0.013	< 0.01
Chromium	0.1	0.083	< 0.03
Lead	0.05	0.116	< 0.02
Silver	0.02	0.221	0.027
Cyanide	0.7	< 0.35	< 0.35

SMALL SAFETY STORAGE BUILDING

Two samples from the "Small" Safety Storage Building were analyzed. The first was a sample of the water used for decontamination purposes, and the second was from the final rinse of the area following decontamination. Silver, chromium and cyanide were detected in the decontamination water sample at 170 mg/L, 0.103 mg/L, and 92 mg/L, respectively. Each of these parameters exceeded the target cleanup levels.

Analysis of the final rinse water sample indicated a silver concentration of 0.68 mg/L, and a cyanide concentration of 0.58 mg/L; chromium was not detected. The silver concentration remains in excess of the target cleanup level, while both cyanide and chromium concentrations meet the target cleanup level. The concentration of silver was reduced by 99.6 percent through decontamination procedures.

During the decontamination procedure, it was discovered that the building floor is a porous plywood material and not constructed of nonporous fiberglass. Montgomery Watson believes

the remaining silver in the rinse water is a result of silver being released from the plywood during the rinsing and drying of the floor panels; therefore, a revision to the Closure Plan was submitted to the EPA on May 8, 1995. This revision included a request to dispose of the plywood flooring. The disposal would be conducted in lieu of attempting to achieve closure standards for silver in this porous material. The revision to the Closure Plan was approved, by the EPA, in a letter dated May 22, 1995. Copies of the revision request and acceptance letters are included in Appendix E.

Montgomery Watson believes that disposal of the wooden floor, in accordance with appropriate regulations, removes the remaining contamination within the "Small" Safety Storage Building and meets the objectives of RCRA Closure. This area will be considered closed.

Parameter Targeted	Target Concentration (mg/L)	Wash Concentration (mg/L)	Rinse Concentration (mg/L)
1,1,1-Trichloroethane	0.2	< 0.001	< 0.001
1,1,2-Trichloro-1,2,2-trifluoroethane	0.001	< 0.001	< 0.001
Methyl Isobutyl Ketone	2	< 0.005	< 0.005
Benzene	0.005	< 0.001	< 0.001
Ethylbenzene	4	< 0.001	< 0.001
Toluene	10	< 0.001	< 0.001
Xylenes	70	< 0.001	< 0.001
Methyl Ethyl Ketone	2	< 0.005	< 0.005
Cadmium	0.01	< 0.01	< 0.01
Chromium	0.1	0.103	< 0.03
Lead	0.05	0.032	0.028
Silver	0.02	170	0.68
Cyanide	0.7	92	0.58

QUALITY ASSURANCE AND QUALITY CONTROL

Two duplicate samples (Dup-1 and Dup-2) were collected from rinse waters in the Outdoor Storage Rack Area and Cyanide Storage Area, respectively. Analytical results showed concentrations of constituents in these samples were within 10 percent of the concentrations in the corresponding samples (Outdoor-Rinse and Cyanide Storage-Rinse) (Appendix C). EPA personnel also collected water samples while on site. The analytical results of these samples generally were in agreement with the results of those collected by Montgomery Watson. Additionally, one sample of the source water and one equipment blank sample were also collected. The equipment blank sample was obtained from distilled water rinsed through an empty drum. Both samples revealed nondetectable concentrations of constituents to be analyzed as part of the closure activities (Appendix C).

CONCLUSIONS

The analytical results presented in this section indicate that the objective of a RCRA Closure has been met in all areas except the "Small" Safety Storage Building. The proposed and approved Closure Plan revision addresses the remaining silver concentrations within the "Small" Safety Storage Building through disposal of the porous plywood floor.

Montgomery Watson believes that all areas relevant to the approved Closure Plan have been closed in accordance with the Closure Plan, as detailed in this report, and meet the objectives of 40 CFR 265 Subpart G.

APPENDIX A

APPENDIX A

PHOTO LOG



SMALL SAFETY STORAGE BUILDING DURING CLOSURE ACTIVITIES.
NOTE: SPILL PANS STORED INSIDE.



ELECTROPLATING SLUDGE STORAGE AREA AFTER COMPLETION OF CLOSURE.



MONTGOMERY WATSON

GENERAL ELECTRIC
WEST BURLINGTON, IOWA

PHOTO LOG 1



ELECTROPLATING SLUDGE STORAGE AREA
WITH BAG OF FLOOR SWEEPINGS AND PLASTIC
SHEETING FROM TEMPORARY ENCLOSURE.

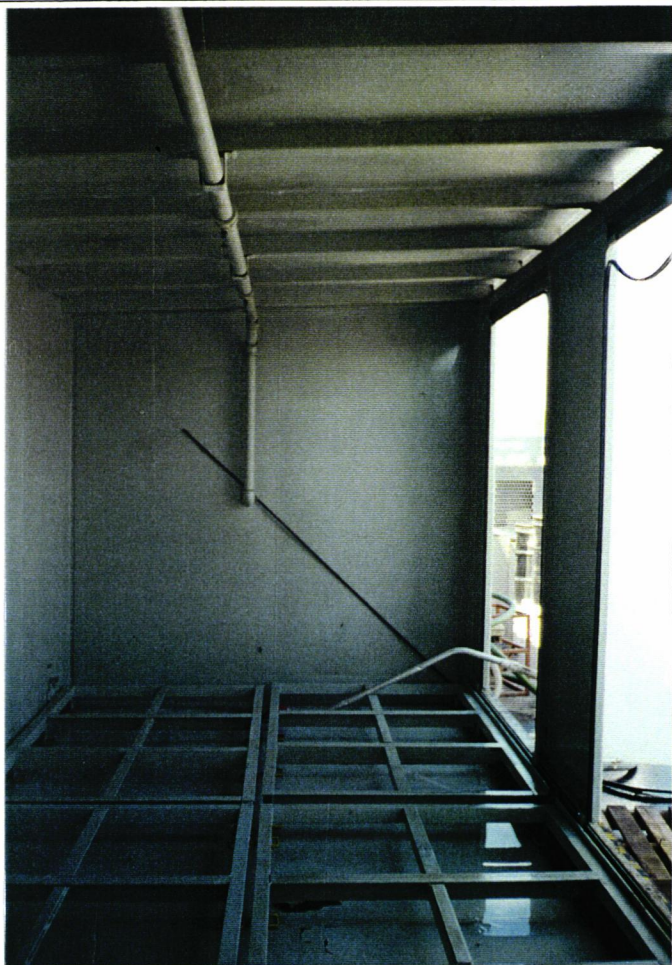
CLOSE-UP OF SPILL PANS PRIOR TO
CLOSURE ACTIVITIES.



MONTGOMERY WATSON

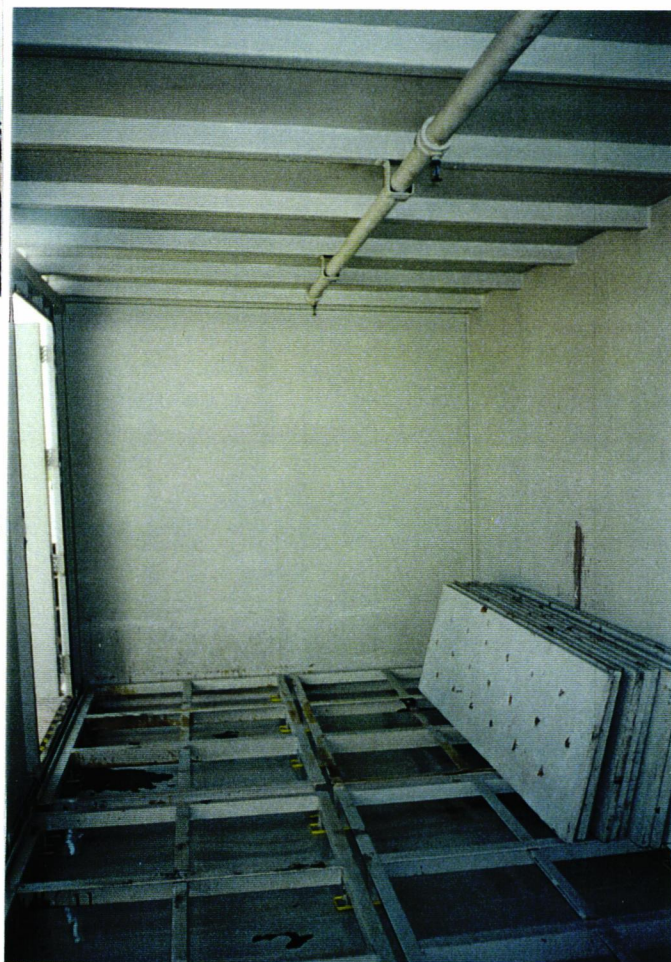
GENERAL ELECTRIC
WEST BURLINGTON, IOWA

PHOTO LOG 2



SMALL SAFETY STORAGE BUILDING
FOLLOWING FLOOR REMOVAL AND
DECONTAMINATION. RINSE WATER IS BEING
REMOVED WITH THE DRUM VACUUM.

INSIDE OF SMALL SAFETY STORAGE
BUILDING FOLLOWING
DECONTAMINATION AND RINSING.
NOTE PLYWOOD FLOOR PANELS
STACKED ON THE RIGHT.



MONTGOMERY WATSON

GENERAL ELECTRIC
WEST BURLINGTON, IOWA

PHOTO LOG 3



OUTDOOR STORAGE RACKS FOLLOWING DECONTAMINATION AND FINAL RINSE.



OUTDOOR STORAGE RACK AND SMALL SAFETY STORAGE BUILDING FOLLOWING CLOSURE. NOTE DRUMS CONTAINING DECONTAMINATION AND RINSE WATERS.



MONTGOMERY WATSON

GENERAL ELECTRIC
WEST BURLINGTON, IOWA

PHOTO LOG 4

APPENDIX B

APPENDIX B

CHAIN OF CUSTODY

Keystone

LABORATORIES, INC.

501 West Third Street North, Suite A
Newton, Iowa 50208

1-800-858-LABS Fax: 515-792-7989

PAGE 2 OF 2

PRINT OR TYPE INFORMATION BELOW

SAMPLER: Lisa Larson
SITE NAME: General Electric
ADDRESS: Burlington
CITY/ST/ZIP: _____
PHONE: _____

REPORT TO:

NAME: Terry Noteboom
COMPANY NAME: Montgomery Watson
ADDRESS: 11107 Aurora Ave
CITY/ST/ZIP: Des Moines, IA 50322
PHONE: 515-253-0830

BILL TO:

NAME: Same as Report
COMPANY NAME: Job # 3286.0150
ADDRESS: _____
CITY/ST/ZIP: _____
PHONE: _____

LAB USE ONLY

LABORATORY WORK ORDER NO.

9504.389

SAMPLE CONDITION
AS RECEIVED:

CHILLED ☒ YES ☐ NO
SEALED ☒ YES ☐ NO

LABORATORY
SAMPLE
NUMBER

SAMPLE CONDITION COMMENTS

9505315

9505316

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	ANALYSES REQUIRED										
							BTEX / TPH ONLY (OA1)	BTEX / TPH / TEH (OA1/OA2)	TEH ONLY (OA2)	Metals	Cyanide	VOCs					
<u>Dup - 1</u>	<u>4/19/95</u>	<u>2:30</u>	<u>Job # 3286.0150</u>	<u>5</u>						<u>1</u>	<u>1</u>	<u>3</u>					
<u>Dup - 2</u>	<u>4/19/95</u>	<u>1:00</u>	<u>General Electric</u>	<u>2</u>						<u>1</u>	<u>1</u>						

Relinquished by: (Signature) <u>Lisa Larson</u>	Date <u>4/20/95</u>	Received by: (Signature)	Date	Remarks: <u>Metals = Lead, Silver, Cadmium, Chromium</u> <u>& see attached</u> <u>VOCs = see attached listing</u>
	Time		Time	
Relinquished by: (Signature)	Date	Received for Lab by: (Signature) <u>Charles G. Hunt</u>	Date <u>4-20-95</u>	
	Time		Time <u>11:25</u>	

CHAIN OF CUSTODY RECORD

Keystone

LABORATORIES, INC.

501 West Third Street North, Suite A
Newton, Iowa 50208

1-800-858-LABS Fax: 515-792-7989

PAGE 1 OF 2

PRINT OR TYPE INFORMATION BELOW

SAMPLER: Lisa Larson
SITE NAME: General Electric
ADDRESS: Burlington
CITY/ST/ZIP: _____
PHONE: _____

REPORT TO:
NAME: Terry Noteboom
COMPANY NAME: Montgomery Watson
ADDRESS: 11107 Aurora Ave
CITY/ST/ZIP: Des Moines IA 50322
PHONE: 515-253-0830

BILL TO: Same as report
NAME: _____
COMPANY NAME: Job #3286.0150
ADDRESS: _____
CITY/ST/ZIP: _____
PHONE: _____

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	ANALYSES REQUIRED							LAB USE ONLY	
							BTEX / TPH ONLY (OA1)	BTEX / TPH / TEH (OA1/OA2)	TEH ONLY (OA2)	Metals	Cyanide	VOCs		LABORATORY WORK ORDER NO.	LABORATORY SAMPLE NUMBER
Sm Bldg - Wash	4/19/95	4:20	Job #3286.0150	5						1	1	3		9504.389	9505305
Jm Bldg - Rinse	"	4:20	General	5						1	1	3			9505306
Sludge Stor - Wash	"	4:30	Electric	5						1	1	3			9505307
Sludge Stor - Rinse	"	4:30		5						1	1	3			9505308
Cyan Stor - Wash	"	5:00		2						1	1				9505309
Cyan Stor - Rinse	"	5:00		2						1	1				9505310
Outdoor - Wash	"	3:40		5						1	1	3			9505311
Outdoor - Rinse	"	3:40		5						1	1	3			9505312
Source	"	5:20		5						1	1	3			9505313
Decon	"	4:10		1						1					9505314

Relinquished by: (Signature) <u>Lisa Larson</u>	Date <u>4/20/95</u>	Received by: (Signature) 	Date 	Remarks: Metals = Lead, Silver, Cadmium: Chromium x occ attached VOCs = see attached listing
Relinquished by: (Signature) 	Date 	Received for Lab by: (Signature) <u>Charles Wood</u>	Date <u>4-20-95</u>	
	Time 		Time 	
	Time 		Time <u>11:25</u>	

APPENDIX C

APPENDIX C

LABORATORY ANALYTICAL REPORT



LABORATORIES, INC.

Quality ▼ Value ▼ Service

ANALYTICAL REPORT

Page 1 of 2

Report To

Terry Noteboom
Montgomery-Watson
11107 Aurora Avenue

Des Moines, IA 50322
515-253-0830
Report Date: 05/04/95

Sample Information

Work Order: 9504.389
Sample No: 9505305
Date Collected: 04/19/95 04:20 PM
Date Received: 04/20/95 11:25 AM
Collector: Lisa Larson
Collector Phone: 515-253-0830
Matrix: water

Site Information/Sample Description

General Electric
Burlington, IA
Job #3286.0150

SM Bldg - Wash

Comments

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
Determination of volatile organic compounds.					
1,1,1-Trichloroethane	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
1,1,2-Trichlorotrifluoroethane	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
2-Butanone (MEK)	< 5. ug/L	5.	EPA 8260	MSS	05/02/95
4-Methyl-2-pentanone (MIBK)	< 5. ug/L	5.	EPA 8260	MSS	05/02/95
Benzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Ethylbenzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Toluene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Xylenes, total	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Determination of metals.					
Cadmium, total	< 0.01 mg/L	0.01	EPA 6010	LAR	04/24/95
Chromium, total	0.103 mg/L	0.03	EPA 6010	LAR	04/24/95
Lead, total	0.032 mg/L	0.02	EPA 7421	LAR	04/24/95
Silver, total	170. mg/L	0.03	EPA 6010	LKM	05/01/95
Determination of general chemistry parameters.					
Cyanide, total	92. mg/L	0.35	EPA 9010	JET	04/21/95

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



LABORATORIES, INC.

Quality ▼ Value ▼ Service

Work Order: 9504.389

Site Name / Sample Description

Page 2 of 2

Sample No: 9505305

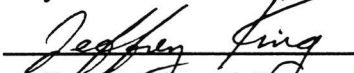
General Electric

Report Date: 5/4/95

SM Bldg - Wash

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
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Keystone Laboratories, Inc.


Jeffrey N. King, Ph.D.

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



LABORATORIES, INC.

Quality ▼ Value ▼ Service

ANALYTICAL REPORT

Page 1 of 2

Report To
Terry Noteboom Montgomery-Watson 11107 Aurora Avenue Des Moines, IA 50322 515-253-0830 Report Date: 05/04/95

Sample Information
Work Order: 9504.389 Sample No: 9505306 Date Collected: 04/19/95 04:20 PM Date Received: 04/20/95 11:25 AM Collector: Lisa Larson Collector Phone: 515-253-0830 Matrix: water

Site Information/Sample Description
General Electric Burlington, IA Job #3286.0150 SM Bldg - Rinse

Comments

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
Determination of volatile organic compounds.					
1,1,1-Trichloroethane	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
1,1,2-Trichlorotrifluoroethane	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
2-Butanone (MEK)	< 5. ug/L	5.	EPA 8260	MSS	05/02/95
4-Methyl-2-pentanone (MIBK)	< 5. ug/L	5.	EPA 8260	MSS	05/02/95
Benzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Ethylbenzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Toluene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Xylenes, total	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Determination of metals.					
Cadmium, total	< 0.01 mg/L	0.01	EPA 6010	LAR	04/24/95
Chromium, total	< 0.03 mg/L	0.03	EPA 6010	LAR	04/24/95
Lead, total	0.028 mg/L	0.02	EPA 7421	LAR	04/24/95
Silver, total	0.68 mg/L	0.03	EPA 6010	LAR	04/24/95
Determination of general chemistry parameters.					
Cyanide, total	0.58 mg/L	0.35	EPA 9010	JET	04/27/95

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



LABORATORIES, INC.

Quality ▼ Value ▼ Service

Work Order: 9504.389

Site Name / Sample Description

Page 2 of 2

Sample No: 9505306

General Electric

Report Date: 5/4/95

SM Bldg - Rinse

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
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Keystone Laboratories, Inc.


Jeffrey N. King, Ph.D.

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



LABORATORIES, INC.

Quality ▼ Value ▼ Service

ANALYTICAL REPORT

Page 1 of 1

Report To
Terry Noteboom Montgomery-Watson 11107 Aurora Avenue Des Moines, IA 50322 515-253-0830 Report Date: 05/04/95

Sample Information
Work Order: 9504.389 Sample No: 9505307 Date Collected: 04/19/95 04:30 PM Date Received: 04/20/95 11:25 AM Collector: Lisa Larson Collector Phone: 515-253-0830 Matrix: water

Site Information/Sample Description
General Electric Burlington, IA Job #3286.0150 Sludge Stor - Wash

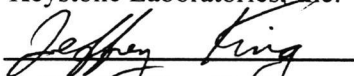
Comments

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
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Determination of volatile organic compounds.

Benzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
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Keystone Laboratories, Inc.


Jeffrey N. King, Ph.D.

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



LABORATORIES, INC.

Quality ▼ Value ▼ Service

ANALYTICAL REPORT

Page 1 of 1

Report To

Terry Noteboom
Montgomery-Watson
11107 Aurora Avenue

Des Moines, IA 50322
515-253-0830
Report Date: 05/04/95

Sample Information

Work Order: 9504.389
Sample No: 9505307
Date Collected: 04/19/95 04:30 PM
Date Received: 04/20/95 11:25 AM
Collector: Lisa Larson
Collector Phone: 515-253-0830
Matrix: water

Site Information/Sample Description

General Electric
Burlington, IA
Job #3286.0150

Sludge Stor - Wash

Comments

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
Determination of volatile organic compounds.					
2-Butanone (MEK)	7.3 ug/L	5.	EPA 8260	MSS	05/02/95
4-Methyl-2-pentanone (MIBK)	< 5. ug/L	5.	EPA 8260	MSS	05/02/95
Ethylbenzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Toluene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Xylenes, total	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Determination of metals.					
Cadmium, total	0.018 mg/L	0.01	EPA 6010	LAR	04/24/95
Chromium, total	0.249 mg/L	0.03	EPA 6010	LAR	04/24/95
Lead, total	0.197 mg/L	0.02	EPA 7421	LAR	04/24/95
Silver, total	0.142 mg/L	0.03	EPA 6010	LAR	04/24/95
Determination of general chemistry parameters.					
Cyanide, total	< 0.35 mg/L	0.35	EPA 9010	JET	04/21/95

Keystone Laboratories, Inc.


Jeffrey N. King, Ph.D.

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



LABORATORIES, INC.

Quality ▼ Value ▼ Service

ANALYTICAL REPORT

Page 1 of 1

Report To

Terry Noteboom
Montgomery-Watson
11107 Aurora Avenue

Des Moines, IA 50322
515-253-0830

Report Date: 05/04/95

Sample Information

Work Order: 9504.389

Sample No: 9505308

Date Collected: 04/19/95 04:30 PM

Date Received: 04/20/95 11:25 AM

Collector: Lisa Larson

Collector Phone: 515-253-0830

Matrix: water

Site Information/Sample Description

General Electric
Burlington, IA
Job #3286.0150

Sludge Stor - Rinse

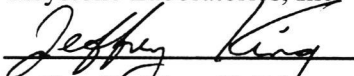
Comments

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
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Determination of volatile organic compounds.

Benzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
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Keystone Laboratories, Inc.


Jeffrey N. King, Ph.D.

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



LABORATORIES, INC.

Quality ▼ Value ▼ Service

ANALYTICAL REPORT

Page 1 of 1

Report To

Terry Noteboom
Montgomery-Watson
11107 Aurora AvenueDes Moines, IA 50322
515-253-0830

Report Date: 05/04/95

Sample Information

Work Order: 9504.389

Sample No: 9505308

Date Collected: 04/19/95 04:30 PM

Date Received: 04/20/95 11:25 AM

Collector: Lisa Larson

Collector Phone: 515-253-0830

Matrix: water

Site Information/Sample Description

General Electric
Burlington, IA
Job #3286.0150

Sludge Stor - Rinse

Comments

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
Determination of volatile organic compounds.					
2-Butanone (MEK)	< 5. ug/L	5.	EPA 8260	MSS	05/02/95
4-Methyl-2-pentanone (MIBK)	< 5. ug/L	5.	EPA 8260	MSS	05/02/95
Ethylbenzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Toluene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Xylenes, total	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Determination of metals.					
Cadmium, total	< 0.01 mg/L	0.01	EPA 6010	LAR	04/24/95
Chromium, total	< 0.03 mg/L	0.03	EPA 6010	LAR	04/24/95
Lead, total	0.029 mg/L	0.02	EPA 7421	LAR	04/24/95
Silver, total	0.02 mg/L	0.005	EPA 7761	LAR	04/27/95
Determination of general chemistry parameters.					
Cyanide, total	< 0.35 mg/L	0.35	EPA 9010	JET	04/21/95

Keystone Laboratories, Inc.


Jeffrey N. King, Ph.D.

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



LABORATORIES, INC.

Quality ▼ Value ▼ Service

ANALYTICAL REPORT

Page 1 of 1

Report To

Terry Noteboom
Montgomery-Watson
11107 Aurora Avenue

Des Moines, IA 50322
515-253-0830

Report Date: 05/04/95

Sample Information

Work Order: 9504.389

Sample No: 9505309

Date Collected: 04/19/95 05:00 PM

Date Received: 04/20/95 11:25 AM

Collector: Lisa Larson

Collector Phone: 515-253-0830

Matrix: water

Site Information/Sample Description


General Electric
Burlington, IA
Job #3286.0150

Cyan Stor - Wash

Comments

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
Determination of metals.					
Cadmium, total	0.013 mg/L	0.01	EPA 6010	LAR	04/24/95
Chromium, total	0.083 mg/L	0.03	EPA 6010	LAR	04/24/95
Lead, total	0.116 mg/L	0.02	EPA 7421	LAR	04/24/95
Silver, total	0.221 mg/L	0.03	EPA 6010	LAR	04/24/95
Determination of general chemistry parameters.					
Cyanide, total	< 0.35 mg/L	0.35	EPA 9010	JET	04/21/95

Keystone Laboratories, Inc.


Jeffrey N. King, Ph.D.

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



LABORATORIES, INC.

Quality ▼ Value ▼ Service

ANALYTICAL REPORT

Page 1 of 1

Report To:
Terry Noteboom Montgomery-Watson 11107 Aurora Avenue Des Moines, IA 50322 515-253-0830 Report Date: 05/04/95

Sample Information:
Work Order: 9504.389 Sample No: 9505310 Date Collected: 04/19/95 05:00 PM Date Received: 04/20/95 11:25 AM Collector: Lisa Larson Collector Phone: 515-253-0830 Matrix: water

Site Information / Sample Description
General Electric Burlington, IA Job #3286.0150 Cyan Stor - Rinse

Comments

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
Determination of metals.					
Cadmium, total	< 0.01 mg/L	0.01	EPA 6010	LAR	04/24/95
Chromium, total	< 0.03 mg/L	0.03	EPA 6010	LAR	04/24/95
Lead, total	< 0.02 mg/L	0.02	EPA 7421	LAR	04/24/95
Silver, total	0.027 mg/L	0.005	EPA 7761	LKM	04/25/95
Determination of general chemistry parameters.					
Cyanide, total	< 0.35 mg/L	0.35	EPA 9010	JET	04/24/95

Keystone Laboratories, Inc.

 Jeffrey N. King, Ph.D.

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



LABORATORIES, INC.

Quality ▼ Value ▼ Service

ANALYTICAL REPORT

Page 1 of 1

Report To

Terry Noteboom
Montgomery-Watson
11107 Aurora Avenue

Des Moines, IA 50322
515-253-0830
Report Date: 05/04/95

Sample Information

Work Order: 9504.389
Sample No: 9505311
Date Collected: 04/19/95 03:40 PM
Date Received: 04/20/95 11:25 AM
Collector: Lisa Larson
Collector Phone: 515-253-0830
Matrix: water

Site Information/Sample Description

General Electric
Burlington, IA
Job #3286.0150

Outdoor - Wash

Comments

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
Determination of volatile organic compounds.					
1,1,1-Trichloroethane	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
1,1,2-Trichlorotrifluoroethane	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
4-Methyl-2-pentanone (MIBK)	< 5. ug/L	5.	EPA 8260	MSS	05/02/95
Benzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Ethylbenzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Toluene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Xylenes, total	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Determination of metals.					
Cadmium, total	< 0.01 mg/L	0.01	EPA 6010	LAR	04/24/95
Chromium, total	< 0.03 mg/L	0.03	EPA 6010	LAR	04/24/95
Lead, total	0.047 mg/L	0.02	EPA 7421	LAR	04/24/95
Silver, total	0.017 mg/L	0.005	EPA 7761	LKM	04/25/95
Determination of general chemistry parameters.					
Cyanide, total	< 0.35 mg/L	0.35	EPA 9010	JET	04/24/95

Keystone Laboratories, Inc.


Jeffrey N. King, Ph.D.

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



LABORATORIES, INC.

Quality ▼ Value ▼ Service

ANALYTICAL REPORT

Page 1 of 1

Report To

Terry Noteboom
Montgomery-Watson
11107 Aurora Avenue

Des Moines, IA 50322
515-253-0830
Report Date: 05/04/95

Sample Information

Work Order: 9504.389
Sample No: 9505312
Date Collected: 04/19/95 03:40 PM
Date Received: 04/20/95 11:25 AM
Collector: Lisa Larson
Collector Phone: 515-253-0830
Matrix: water

Site Information/Sample Description

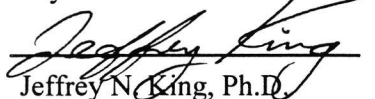
General Electric
Burlington, IA
Job #3286.0150

Outdoor - Rinse

Comments

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
Determination of volatile organic compounds.					
1,1,1-Trichloroethane	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
1,1,2-Trichlorotrifluoroethane	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
4-Methyl-2-pentanone (MIBK)	< 5. ug/L	5.	EPA 8260	MSS	05/02/95
Benzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Ethylbenzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Toluene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Xylenes, total	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Determination of metals.					
Cadmium, total	< 0.01 mg/L	0.01	EPA 6010	LAR	04/24/95
Chromium, total	< 0.03 mg/L	0.03	EPA 6010	LAR	04/24/95
Lead, total	< 0.02 mg/L	0.02	EPA 7421	LAR	04/24/95
Silver, total	< 0.005 mg/L	0.005	EPA 7761	LKM	04/25/95
Determination of general chemistry parameters.					
Cyanide, total	< 0.35 mg/L	0.35	EPA 9010	JET	04/24/95

Keystone Laboratories, Inc.


Jeffrey N. King, Ph.D.

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



LABORATORIES, INC.

Quality ▼ Value ▼ Service

ANALYTICAL REPORT

Page 1 of 2

Report To

Terry Noteboom
Montgomery-Watson
11107 Aurora Avenue

Des Moines, IA 50322
515-253-0830
Report Date: 05/04/95

Sample Information

Work Order: 9504.389
Sample No: 9505313
Date Collected: 04/19/95 05:20 PM
Date Received: 04/20/95 11:25 AM
Collector: Lisa Larson
Collector Phone: 515-253-0830
Matrix: water

Site Information/Sample Description

General Electric
Burlington, IA
Job #3286.0150

Source

Comments

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
Determination of volatile organic compounds.					
1,1,1-Trichloroethane	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
1,1,2-Trichlorotrifluoroethane	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
2-Butanone (MEK)	< 5. ug/L	5.	EPA 8260	MSS	05/02/95
4-Methyl-2-pentanone (MIBK)	< 5. ug/L	5.	EPA 8260	MSS	05/02/95
Benzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Ethylbenzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Toluene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Xylenes, total	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Determination of metals.					
Cadmium, total	< 0.01 mg/L	0.01	EPA 6010	LAR	04/24/95
Chromium, total	< 0.03 mg/L	0.03	EPA 6010	LAR	04/24/95
Lead, total	< 0.02 mg/L	0.02	EPA 7421	LAR	04/24/95
Silver, total	< 0.005 mg/L	0.005	EPA 7761	LKM	04/25/95
Determination of general chemistry parameters.					
Cyanide, total	< 0.35 mg/L	0.35	EPA 9010	JET	04/24/95

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



LABORATORIES, INC.

Quality ▼ Value ▼ Service

ANALYTICAL REPORT

Page 1 of 1

Report To

Terry Noteboom
Montgomery-Watson
11107 Aurora Avenue

Des Moines, IA 50322
515-253-0830
Report Date: 05/04/95

Sample Information

Work Order: 9504.389
Sample No: 9505314
Date Collected: 04/19/95 04:10 PM
Date Received: 04/20/95 11:25 AM
Collector: Lisa Larson
Collector Phone: 515-253-0830
Matrix: water

Site Information/Sample Description

General Electric
Burlington, IA
Job #3286.0150

Decon

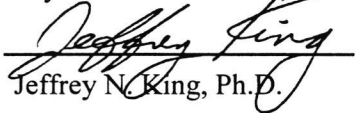
Comments

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
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Determination of metals.

Cadmium, total	< 0.01 mg/L	0.01	EPA 6010	LAR	04/24/95
Chromium, total	< 0.03 mg/L	0.03	EPA 6010	LAR	04/24/95
Lead, total	< 0.02 mg/L	0.02	EPA 7421	LAR	04/24/95
Silver, total	< 0.005 mg/L	0.005	EPA 7761	LKM	04/25/95

Keystone Laboratories, Inc.


Jeffrey N. King, Ph.D.

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm

Keystone

LABORATORIES, INC.

Quality ▼ Value ▼ Service

Work Order: 9504.389

Site Name / Sample Description

Page 2 of 2

Sample No: 9505313

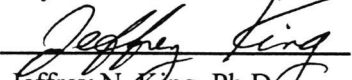
General Electric

Report Date: 5/4/95

Source

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
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Keystone Laboratories, Inc.


Jeffrey N. King, Ph.D.

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



LABORATORIES, INC.

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ANALYTICAL REPORT

Page 1 of 1

Report To

Terry Noteboom
Montgomery-Watson
11107 Aurora AvenueDes Moines, IA 50322
515-253-0830

Report Date: 05/04/95

Sample Information

Work Order: 9504.389

Sample No: 9505315

Date Collected: 04/19/95 02:30 PM

Date Received: 04/20/95 11:25 AM

Collector: Lisa Larson

Collector Phone: 515-253-0830

Matrix: water

Site Information/Sample Description

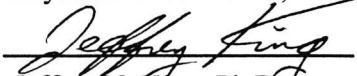
General Electric
Burlington, IA
Job #3286.0150

DUP-1

Comments

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
Determination of volatile organic compounds.					
1,1,1-Trichloroethane	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
1,1,2-Trichlorotrifluoroethane	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
4-Methyl-2-pentanone (MIBK)	< 5. ug/L	5.	EPA 8260	MSS	05/02/95
Benzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Ethylbenzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Toluene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Xylenes, total	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Determination of metals.					
Cadmium, total	< 0.01 mg/L	0.01	EPA 6010	LAR	04/24/95
Chromium, total	< 0.03 mg/L	0.03	EPA 6010	LAR	04/24/95
Lead, total	< 0.02 mg/L	0.02	EPA 7421	LAR	04/24/95
Silver, total	< 0.005 mg/L	0.005	EPA 7761	LKM	04/25/95
Determination of general chemistry parameters.					
Cyanide, total	< 0.35 mg/L	0.35	EPA 9010	JET	04/24/95

Keystone Laboratories, Inc.


Jeffrey N. King, Ph.D.

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



LABORATORIES, INC.

Quality ▼ Value ▼ Service

ANALYTICAL REPORT

Page 1 of 1

Report To

Terry Noteboom
Montgomery-Watson
11107 Aurora Avenue

Des Moines, IA 50322
515-253-0830

Report Date: 05/04/95

Sample Information

Work Order: 9504.389

Sample No: 9505316

Date Collected: 04/19/95 01:00 PM

Date Received: 04/20/95 11:25 AM

Collector: Lisa Larson

Collector Phone: 515-253-0830

Matrix: water

Site Information/Sample Description

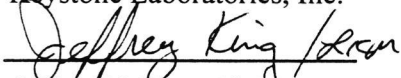
General Electric
Burlington, IA
Job #3286.0150

DUP-2

Comments

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
Determination of metals.					
Cadmium, total	< 0.01 mg/L	0.01	EPA 6010	LAR	04/24/95
Chromium, total	< 0.03 mg/L	0.03	EPA 6010	LAR	04/24/95
Lead, total	0.023 mg/L	0.02	EPA 7421	LAR	04/24/95
Silver, total	0.03 mg/L	0.001	EPA 7761	LKM	04/25/95
Determination of general chemistry parameters.					
Cyanide, total	< 0.35 mg/L	0.35	EPA 9010	JET	04/24/95

Keystone Laboratories, Inc.


Jeffrey N. King, Ph.D.

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm

APPENDIX D

APPENDIX D

**LABORATORY
QUALITY ASSURANCE/QUALITY CONTROL REPORT**



LABORATORIES, INC.

Quality ▼ Value ▼ Service

Work Order: 9504.389

Method: EPA 8260

Batch: voc_050295a

Sample #	1,2-dichloroethane-d4	toluene-d8	bromofluorobenzene
Blank	105	103	99
9505305	107	101	103
9505306	109	101	102
9505307	105	102	102
9505308	105	101	100
9505311	107	101	103
9505311-MS	107	100	101
9505311-MSD	106	99	101
9505312	106	100	101
9505313	106	100	101
9505315	107	101	102



LABORATORIES, INC.

Quality ▼ Value ▼ Service

Work Order: 9504.389

Method: EPA 8260

Batch: voc_050295a

Sample #	Analyte	Sample	MS (%)	MSD (%)	RPD (%)
9505305					
9505306					
9505307					
9505308					
9505311	1,1-dichloroethylene	<1 ug/L	126	127	1
	benzene	<1 ug/L	107	107	0
	trichloroethylene	< 1 ug/L	109	110	1
	toluene	< 1 ug/L	106	106	0
	chlorobenzene	< 1 ug/L	108	109	1
9505312					
9505313					
9505315					
Blank					



LABORATORIES, INC.

Quality ▼ Value ▼ Service

Work Order: 9504.389

Method: EPA 8260

Batch: voc_050295a

Analyte	Blank Concentration
1,1,1-Trichloroethane	< 1 ug/L
1,1,2-Trichlorotrifluoroethane	< 1 ug/L
2-Butanone (MEK)	< 5 ug/L
4-Methyl-2-pentanone (MIBK)	< 5 ug/L
Benzene	< 1 ug/L
Ethylbenzene	< 1 ug/L
Toluene	< 1 ug/L
Xylenes, total	< 1 ug/L



LABORATORIES, INC.

Quality ▼ Value ▼ Service

Work Order: 9504.389

Method: Metals Analysis

Sample #	Analyte	Sample	MS (%)	Blank
9505305				
9505306				
9505307	Cyanide	< 0.35	110	< 0.35 mg/L
9505308				
9505309				
9505310				
9505311				
9505312				
9505313	Cadmium	< 0.01 mg/L	80	< 0.01 mg/L
	Chromium	< 0.03 mg/L	92	< 0.03 mg/L
	Silver	< 0.005 mg/L	76	< 0.005 mg/L
	Lead	< 0.005 mg/L	100	< 0.005 mg/L
9505314				
9505315				

APPENDIX E

APPENDIX E

REVISION REQUEST AND ACCEPTANCE LETTERS



MONTGOMERY WATSON

May 8, 1995

Mr. Don Lininger
Environmental Protection Agency
Region VII
RCRA/Iowa Branch
726 Minnesota Avenue
Kansas City, KS 66101

MW #3286.0150

RE: Amendment of September 1994 Closure Plan
General Electric Company in West Burlington, Iowa
(EPA ID No. IAD)

Dear Mr. Lininger:

In response to your May 4, 1995 telephone conversation with Terry Noteboom of our office, Montgomery Watson is submitting this letter to request an amendment to the September 1994 Closure Plan.

The Closure Plan for the General Electric Company facility in West Burlington, Iowa was implemented on April 18, 1995 by Montgomery Watson. All areas were decontaminated with a low-foaming detergent in conjunction with high-pressure hot water spray, and utilizing brooms to provide additional mechanical scrubbing power. Decontamination water was then collected directly into steel drums with an air-powered vacuum. Samples for analysis were collected from wash waters and the clean rinse water from each area.

Analyses of the wash and rinse water samples were received via facsimile on May 4, 1995. Rinse water sample analysis for three of the four areas decontaminated meet the cleanup requirements listed in the Closure Plan and will be described in detail in the Closure Certification Report. The fourth area, the small hazardous waste storage building, has a single parameter (silver) which remains above the proposed cleanup level. A copy of both the wash water analysis and rinse water analysis for the small storage building are attached.

The portable building was specifically designed for storage of hazardous chemicals and will probably be returned to this usage following closure certification. The entire building is constructed of nonporous welded steel floor, walls, doors, and roof which has been painted for corrosion protection and aesthetics. The single exception to this construction is the floor above the secondary containment sump which was believed to be fiberglass and was found to be plywood during closure activities.


May 8, 1995

We believe the plywood flooring to be the source of the silver present in the rinse water. All other surfaces within the building are smooth and nonabsorbing which are readily decontaminated. Due to the porous and adsorbent properties of wooden materials, they are difficult to effectively decontaminate.

Montgomery Watson proposes to amend the Closure Plan, with this letter, to state that the plywood flooring from the small storage building will be removed and disposed of in accordance with local, state, and Federal hazardous waste regulations. The expected difficulties and expense of attempting to decontaminate the plywood floor, to the closure performance standard, far exceed the cost of replacing the floor. Removal and disposal of this floor should allow for completion of the Closure Certification Report.

Please feel free to call either Terry Noteboom or me, with questions regarding this requested Closure Plan amendment.

Sincerely,



Jeffrey L. Coon P.E.
Program Director

/tan:vas

Attachments

cc: Max Pickel - General Electric Company



LABORATORIES, INC.

Quality ▼ Value ▼ Service

ANALYTICAL REPORT

Page 1 of 2

Report To

Terry Noteboom
Montgomery-Watson
11107 Aurora Avenue

Des Moines, IA 50322
515-253-0830
Report Date: 05/04/95

Sample Information

Work Order: 9504.389
Sample No: 9505305
Date Collected: 04/19/95 04:20 PM
Date Received: 04/20/95 11:25 AM
Collector: Lisa Larson
Collector Phone: 515-253-0830
Matrix: water

Site Information/Sample Description

General Electric
Burlington, IA
Job #3286.0150

SM Bldg - Wash

Comments

Analyte

Analysis Result

Detection
Limit

Method

Analyst

Date
Analyzed

Determination of volatile organic compounds.

1,1,1-Trichloroethane	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
1,1,2-Trichlorotrifluoroethane	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
2-Butanone (MEK)	< 5. ug/L	5.	EPA 8260	MSS	05/02/95
4-Methyl-2-pentanone (MIBK)	< 5. ug/L	5.	EPA 8260	MSS	05/02/95
Benzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Ethylbenzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Toluene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Xylenes, total	< 1. ug/L	1.	EPA 8260	MSS	05/02/95

Determination of metals.

Cadmium, total	< 0.01 mg/L	0.01	EPA 6010	LAR	04/24/95
Chromium, total	0.103 mg/L	0.03	EPA 6010	LAR	04/24/95
Lead, total	0.032 mg/L	0.02	EPA 7421	LAR	04/24/95
Silver, total	170. mg/L	0.03	EPA 6010	LKM	05/01/95

Determination of general chemistry parameters.

Cyanide, total	92. mg/L	0.35	EPA 9010	JET	04/21/95
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< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm

Keystone

LABORATORIES, INC.

Quality ▼ Value ▼ Service

Work Order: 9504.389

Site Name / Sample Description

Page 2 of 2

Sample No: 9505305

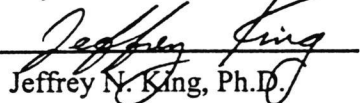
General Electric

Report Date: 5/4/95

SM Bldg - Wash

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
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Keystone Laboratories, Inc.


Jeffrey N. King, Ph.D.

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



LABORATORIES, INC.

Quality ▼ Value ▼ Service

ANALYTICAL REPORT

Page 1 of 2

Report To

Terry Noteboom
Montgomery-Watson
11107 Aurora Avenue

Des Moines, IA 50322
515-253-0830
Report Date: 05/04/95

Sample Information

Work Order: 9504.389
Sample No: 9505306
Date Collected: 04/19/95 04:20 PM
Date Received: 04/20/95 11:25 AM
Collector: Lisa Larson
Collector Phone: 515-253-0830
Matrix: water

Site Information/Sample Description

General Electric
Burlington, IA
Job #3286.0150

SM Bldg - Rinse

Comments

Analyte

Analysis Result

Detection
Limit

Method

Analyst

Date
Analyzed

Determination of volatile organic compounds.

1,1,1-Trichloroethane	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
1,1,2-Trichlorotrifluoroethane	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
2-Butanone (MEK)	< 5. ug/L	5.	EPA 8260	MSS	05/02/95
4-Methyl-2-pentanone (MIBK)	< 5. ug/L	5.	EPA 8260	MSS	05/02/95
Benzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Ethylbenzene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Toluene	< 1. ug/L	1.	EPA 8260	MSS	05/02/95
Xylenes, total	< 1. ug/L	1.	EPA 8260	MSS	05/02/95

Determination of metals.

Cadmium, total	< 0.01 mg/L	0.01	EPA 6010	LAR	04/24/95
Chromium, total	< 0.03 mg/L	0.03	EPA 6010	LAR	04/24/95
Lead, total	0.028 mg/L	0.02	EPA 7421	LAR	04/24/95
Silver, total	0.68 mg/L	0.03	EPA 6010	LAR	04/24/95

Determination of general chemistry parameters.

Cyanide, total	0.58 mg/L	0.35	EPA 9010	JET	04/27/95
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< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm

Keystone

LABORATORIES, INC.

Quality ▼ Value ▼ Service

Work Order: 9504.389

Site Name / Sample Description

Page 2 of 2

Sample No: 9505306


General Electric

Report Date: 5/4/95

SM Bldg - Rinse

Analyte	Analysis Result	Detection Limit	Method	Analyst	Date Analyzed
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Keystone Laboratories, Inc.


Jeffrey N. King, Ph.D.

< = less than; ug/L = ppb; mg/L = ppm; mg/kg = ppm



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
726 MINNESOTA AVENUE
KANSAS CITY, KANSAS 66101

RECEIVED
MAY 24 1995
MW/IOWA

MAY 22 1995

Mr. Eric Rankin
General Electric Company
510 East Agency Road
West Burlington, Iowa 52655

Dear Mr. Rankin:

RE: Closure Plan Amendment Approval for
General Electric Company
West Burlington, Iowa
EPA RCRA ID No. IAD005272703

Receipt is acknowledged of the May 8, 1995 closure plan amendment for the small hazardous waste storage building that was submitted by your consultant, Mr. Jeff Coon of Montgomery Watson. The amendment was submitted to request approval for the removal of the plywood flooring from the small hazardous waste storage building rather than perform additional decontamination activities. This letter provides final approval for the amendment.

We appreciate your cooperation in providing information during the closure plan amendment review process. Any questions concerning this letter may be directed to me at (913) 551-7724.

Sincerely,

Don Lininger
Iowa Section
Air, RCRA and Toxics Division

cc: Joseph Obr, Iowa Department of Natural Resources
Jeff Coon, Montgomery Watson